User's Manual

Fiberglass 30 Laboratory Fume Hoods

Models
3030000
3030001
3030002
3030003
3030004
3030005

Labconco's Mascot,
Labby the LABster

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Fiberglass 30 Laboratory Fume Hood Manual #28316

Warranty

Labconco provides a warranty on all parts and factory workmanship. The warranty includes areas of defective material and workmanship, provided such defect results from normal and proper use of the equipment.

The warranty for all Labconco products will expire one year from date of installation or two years from date of shipment from Labconco, whichever is sooner, except the following:

- Purifier® Delta® Series Biological Safety Cabinets, carry a three-year warranty from date of installation or four years from date of shipment from Labconco, whichever is sooner.
- Carts carry a lifetime warranty.
- Glass is not warranted from breakage due to accident or mishandling.

This limited warranty covers parts and labor, but not transportation and insurance charges. In the event of a warranty claim, contact Labconco Corporation or the dealer who sold you the product. If the cause is determined to be a manufacturing fault, the dealer or Labconco Corporation will repair or replace all defective parts to restore the unit to operation. Under no circumstances shall Labconco Corporation be liable for indirect, consequential, or special damages of any kind. This statement may be altered by a specific published amendment. No individual has authorization to alter the provisions of this warranty policy or its amendments. Lamps and filters are not covered by this warranty. Damage due to corrosion or accidental breakage is also not covered.

Limitation of Liability

The disposal and/or emission of substances used in connection with this equipment may be governed by various federal, state, or local regulations. All users of this equipment are required to become familiar with any regulations that apply in the user's area concerning the dumping of waste materials in or upon water, land, or air and to comply with such regulations. Labconco Corporation is held harmless with respect to user's compliance with such regulations.

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CHAPTER 1
INTRODUCTION

Congratulations on your purchase of a Labconco Fiberglass 30 Laboratory Fume Hood. Your Fiberglass 30 Laboratory Fume Hood is designed to protect you. It is the result of Labconco's more than 50 years experience in manufacturing fume hoods, and users like you suggested many of its features to us.

The Labconco Fiberglass 30 Fume Hood has been engineered to effectively contain toxic, noxious, or other harmful materials when properly installed. The Fiberglass 30 offers many unique features to enhance safety, performance, and visibility. To take full advantage of them, please acquaint yourself with this manual and keep it handy for future reference. If you are unfamiliar with how fume hoods operate, please review *Chapter 4: Performance Features and Safety Precautions* before you begin working in the fume hood. Even if you are an experienced fume hood user, please review *Chapter 5: Using Your Fume Hood,* which describes your Fiberglass 30 features so that you can use the hood efficiently.

About This Manual

This manual is designed to help you install, use, and maintain your laboratory fume hood. Instructions for installing optional equipment on your hood are also included.

Chapter 1: Introduction provides a brief overview of the laboratory fume hood, explains the organization of the manual, and defines the typographical conventions used in the manual.

Chapter 2: Prerequisites explains what you need to do to prepare your site before you install your laboratory fume hood. Electrical and service requirements are discussed.

Chapter 3: Getting Started contains the information you need to properly unpack, inspect, install, and certify your laboratory fume hood.

Chapter 4: Performance Features and Safety Precautions explains how the laboratory fume hood operates and the appropriate precautions you should take when using the fume hood.

Chapter 5: Using Your Fiberglass 30 discusses the basic operation of your fume hood. Information on how to prepare, use and shut down your fume hood is included.

Chapter 6: Maintaining Your Fiberglass 30 explains how to perform routine maintenance on your fume hood.

Chapter 7: Modifying Your Fiberglass 30 explains how to modify the fume hood or add accessories.

Chapter 8: Troubleshooting contains a table of problems you may encounter while using your laboratory fume hood including the probable causes and suggested corrective actions.

Appendix A: Fiberglass 30 Hood Components contains labeled diagrams of all of the components of the fume hoods.

Appendix B: Fiberglass 30 Hood Dimensions contains comprehensive diagrams showing all of the dimensions for the laboratory fume hoods.

Appendix C: Fiberglass 30 Hood Specifications contains the electrical requirements for laboratory fume hood. Wiring diagrams are also included.

Appendix D: References lists the various resources available that deal with laboratory fume hoods.

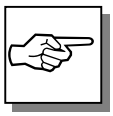
Typographical Conventions

Recognizing the following typographical conventions will help you understand and use this manual:

- Book, chapter, and section titles are shown in italic type (e.g., *Chapter 3: Getting Started*).
- Steps required to perform a task are presented in a numbered format.
- Comments located in the margins provide suggestions, reminders, and references.

- Critical information is presented in boldface type in paragraphs that are preceded by the exclamation icon. Failure to comply with the information following an exclamation icon may result in injury to the user or permanent damage to fume hood.

- Critical information is presented in boldface type in paragraphs that are preceded by the wrench icon. These operations should only be performed by a trained certifier or contractor. Failure to comply with the information following a wrench icon may result in injury to the user or permanent damage to your hood.



- Important information is presented in capitalized type in paragraphs that are preceded by the pointer icon. It is imperative that the information contained in these paragraphs be thoroughly read and understood by the user.

Your Next Step

If your Fume Hood needs to be installed, proceed to *Chapter 2: Prerequisites* to ensure your installation site meets all of the requirements. Then, go to *Chapter 3: Getting Started* for instructions on how to install your laboratory fume hood and make all of the necessary connections.

If you would like to review how laboratory fume hoods operate, go to *Chapter 4: Performance Features and Safety Precautions*.

For information on the operational characteristics of your laboratory fume hood, go to *Chapter 5: Using Your Fiberglass 30 Hood*.

If your laboratory fume hood is installed and you need to perform routine maintenance on the cabinet, proceed to *Chapter 6: Maintaining Your Fiberglass 30 Hood*.

For information on making modifications to the configuration of your fume hood, go to *Chapter 7: Modifying Your Fiberglass 30 Fume Hood*.

Refer to *Chapter 8: Troubleshooting* if you are experiencing problems with your fume hood.

CHAPTER 2
PREREQUISITES

Before you install your laboratory fume hood, you need to prepare your site for installation. Carefully examine the location where you intend to install your hood. You must be certain that the area is level and of solid construction. In addition, a dedicated source of electrical power must be located near the installation site.

Carefully read this chapter to learn the requirements for your installation site:

- The location requirements.
- The support requirements.
- The exhaust requirements.
- The electrical power requirements.
- The service line requirements.
- The space requirements.

Refer to *Appendix B: Fiberglass 30 Hood Dimensions* for complete fume hood dimensions.

Refer to *Appendix C: Fiberglass 30 Hood Specifications* for complete laboratory fume hood electrical and environmental conditions, specifications and requirements.

Location Requirements

The fume hood should be located away from traffic patterns, doors, windows, fans, ventilation registers, and any other air-handling device that could disrupt its airflow patterns. All windows in the room should be closed.

Support Requirements

DO NOT install the fume hood on a cart, dolly, or mobile bench. ALL Fiberglass 30 Hood installations must be permanent and stationary. The supporting structure usually consists of a base cabinet and chemically resistant work surface. See Chapter 7 Modifying Your Fiberglass 30 Hood.

Exhaust Requirements

The exhaust duct connection has been designed for 6" nominal duct (6.625" OD) to allow for minimum static pressure loss while operating at 100 fpm face velocities. The 6" diameter exhaust duct also allows for proper transport velocities away from the hood in the 1000 fpm to 2500 fpm range. The proper exhaust volume and static pressure loss are listed next for each hood model:

Fiberglass 30 Hood with Integral Blower, 100 fpm, 310 cfm, capable of overcoming 0.12" external static pressure.

Fiberglass 30 Hood for use with Remote Blower, 100 fpm, 310 cfm, 0.14" static pressure loss.

Fiberglass 30 Hood with Explosion Proof Blower, 100 fpm, 310 cfm, capable of overcoming 0.12" external static pressure.

Proper blower selection can be determined from these exhaust requirements and the total system static pressure loss. Contact Labconco Customer Service for assistance in sizing a blower.

Electrical Requirements

Other than explosion proof models, the Fiberglass 30 Hood models feature internal wiring for the incandescent light assembly, light switch and blower switch. If your unit has an integral blower, then internal wiring to the blower motor and blower switch is included. Explosion Proof blowers require on site wiring. All internal wiring is terminated at the single point wiring junction box for hook-up by a qualified electrician. Refer to *Chapter 3: Getting Started* and *Appendix* C*: Fiberglass 30 Specifications* for the wiring diagram for proper electrical installation.

Service Line Requirements

All service lines to the laboratory fume hood should be ¼ inch outside diameter, copper (brass for natural gas), and equipped with an easily accessible shut-off valve, should disconnection be required. If the service line pressure exceeds 40 PSI, it must be equipped with a pressure regulator to reduce the line pressure. Please check with local codes for other requirements.

Space Requirements

The dimensions for the different models are shown in *Appendix B: Fiberglass 30 Hood Dimensions*.

Your Next Step

After you have determined that the location you have selected accommodates the installation and operational requirements of your fume hood, you are ready to begin installation. Proceed to *Chapter 3: Getting Started*.

CHAPTER 3
GETTING STARTED

Now that the site for your laboratory fume hood is properly prepared, you are ready to unpack, inspect, install, and certify your unit. Read this chapter to learn how to:

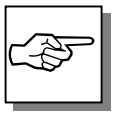
- Unpack and move your Fiberglass 30 Hood.
- Set up the fume hood with the supporting structure and work surface.
- Connect to an exhaust system.
- Connect the electrical supply source.
- Connect the service lines.
- Seal the Fiberglass 30 Hood to the work surface.
- Arrange certification of your Fiberglass 30 Hood.

Depending upon which model you are installing, you may need common plumbing and electrical installation tools in addition to 5/16", 3/8", 7/16", and 1/2" wrenches, ratchets, sockets, a nut driver set, a flat-blade screwdriver, a Phillips screwdriver, and a carpenter level to complete the instructions in the chapter.

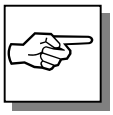
Unpacking Your Laboratory Fume Hood

Carefully remove the shrink-wrap or carton on your fume hood and inspect it for damage that may have occurred in transit. If your unit is damaged, notify the delivery carrier immediately and retain the entire shipment intact for inspection by the carrier.

The United States Interstate Commerce Commission rules require that claims be filed with the delivery carrier within fifteen (15) days of delivery.



DO NOT RETURN GOODS WITHOUT THE PRIOR AUTHORIZATION OF LABCONCO. UNAUTHORIZED RETURNS WILL NOT BE ACCEPTED.



IF YOUR HOOD WAS DAMAGED IN TRANSIT, YOU MUST FILE A CLAIM DIRECTLY WITH THE FREIGHT CARRIER. LABCONCO CORPORATION AND ITS DEALERS ARE NOT RESPONSIBLE FOR SHIPPING DAMAGES.

Do not discard the shipping skid or packing material for your fume hood until you have checked all of the components and installed and tested the unit.

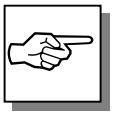
Do not remove the fume hood from its shipping skid until it is ready to be placed into its final location. Move the unit by placing a flat, low dolly under the shipping skid, or by using a floor jack.

THE FIBERGLASS 30 HOOD MODELS WEIGH BETWEEN 96 TO 129 LBS. (44-59 KG). THE SHIPPING SKID ALLOWS FOR LIFTING WITH A MECHANICAL LIFT TRUCK OR FLOOR JACK. IF YOU MUST LIFT THE FUME HOOD MANUALLY, FOLLOW SAFE-LIFTING GUIDELINES.

NORMALLY, THE FUME HOOD CAN BE SLID OFF A HYDRAULIC LIFT TABLE AND BE PLACED INTO POSITION ON TOP OF THE WORK SURFACE. DO NOT LIFT BY THE FRONT AIR FOIL.

Do not move the hood by tilting it onto a hand truck.

Removing the Shipping Skid

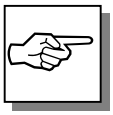


LEAVE THE FUME HOOD ATTACHED TO ITS SHIPPING SKID UNTIL IT IS AS CLOSE TO ITS FINAL LOCATION AS POSSIBLE. MOVE THE HOOD BY USING A SUITABLE FLOOR JACK, OR BY PLACING A FURNITURE DOLLY UNDERDNEATH THE SKID. DO NOT MOVE THE HOOD BY TILTING IT ONTO A HAND TRUCK.

After you verify the fume hood components, move your hood to the location where you want to install it.

Sash Weight Release

To protect the fume hood from damage in shipment, the sash weight has been secured to the back of the fume hood with four (4) screws. Simply remove the screws and make sure the sash cables are on the pulleys before operation of the sash.



NOTE: THE SASH WEIGHT IS MATCHED TO THIS SPECIFIC HOOD AND SHOULD NOT BE EXCHANGED ON ANY OTHER UNIT.

Install the Fiberglass 30 Hood on a Supporting Structure and Work Surface

The Fiberglass 30 Hood is heavy! Use caution when lifting or moving the unit.

When installing the Fiberglass 30 Fume Hood onto a chemically resistant work surface or benchtop, ensure

that the structure can safely support the combined weight of the fume hood and any related equipment. The work surface should be at least as wide as the hood to properly support it. **The work surface is aligned with the back of the fume hood. This will provide the correct spacing under the air foil for proper bypass airflow.**

WARNING: It is important to support the rear of the work surface and fume hood. The cross support provides support for the bottom of the work surface. I**nstall the cross support after the base cabinets and work surface are leveled and before installing the hood.**

The following are instructions for mounting a cross support:

1. Level the base cabinets and the work surface. Work surface should be placed flush with the back of the fume hood as shown in Figure 3-1.
2. Scribe a line on the wall or back of the base cabinet to locate the support under the work surface.
3. Mount the support by attaching it to the wall or base cabinet.
4. Place the hood on top of the work surface and cross support.

The work surface should be smooth and durable, such as a chemically-resistant epoxy resin. The surface should be nonporous and resistant to the acids, solvents, and chemicals used.

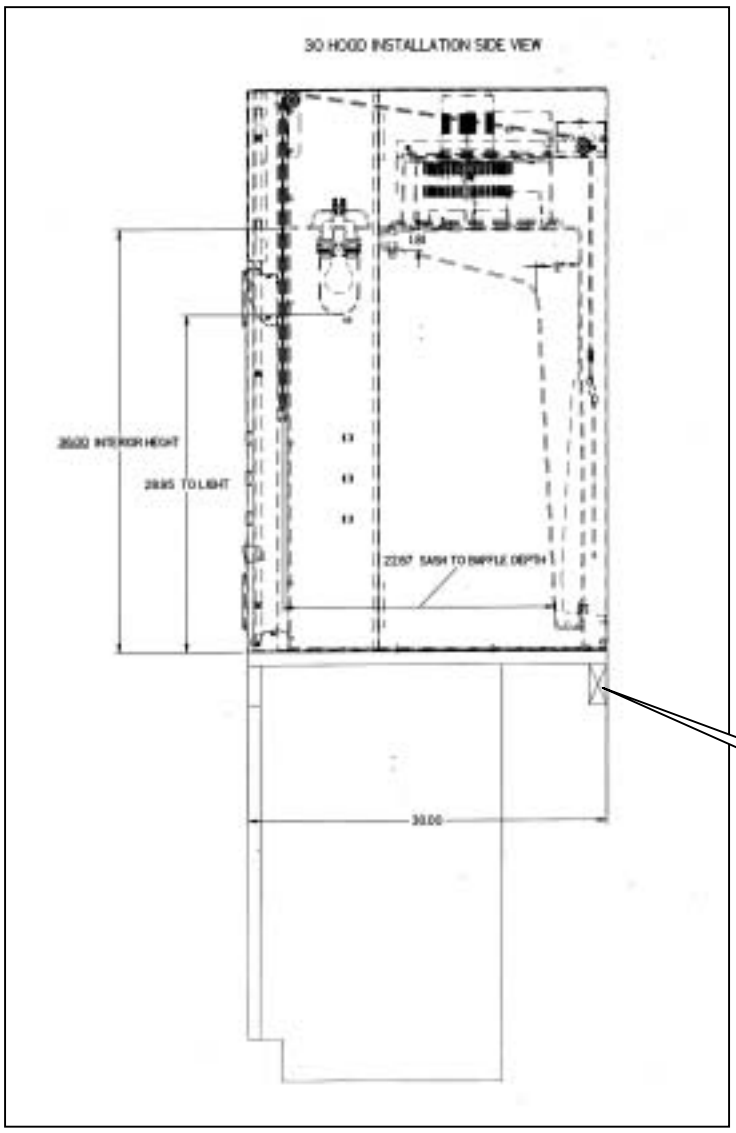


Figure 3-1

Connecting to the Fiberglass 30 Hood Exhaust System

WARNING: The weight of the exhaust ductwork system must be supported independently of the hood superstructure. Do not allow this weight to be supported by the hood structure as damage to the hood may occur.

The exhaust connection should be installed by a qualified HVAC contractor.

The exhaust connection on your hood has been designed for 6" nominal pipe (6.625" OD) to allow for minimum static pressure loss with proper transport velocities away from the hood. Consult Labconco Customer Service should you require help sizing your blower for the exhaust volume and total system static pressure loss. See Chapter 2 for the hood airflow specifications.

The selected exhaust duct material should match the hood procedures and chemicals used to ensure compatibility.

Connecting the Electrical Supply Source to the Fiberglass 30 Fume Hood

Prior to connecting any electrical wiring to the fume hood structure, refer to the hood identification plate for the proper electrical requirements of your specific model.

WARNING: **The building electrical supply system for Fiberglass 30 Hoods should include overload protection. A switch or circuit breaker should be in close proximity to the equipment and within easy reach of the operator. The switch or circuit breaker is to be marked as the disconnecting device for the equipment. Consult the NEC-2002 for proper installation.**

The identification plate, model number, serial number, and electrical connection boxes are accessible from the front of the fume hood by removing the front panel.

The Fiberglass 30 Hood is normally wired for 115 Volt, 60 Hz, 20 Amp or 230 Volt, 50 Hz, 10 Amp electrical services. The number of circuits varies depending on

the model. All of the electrical connections are terminated at the single point internal junction box for hook-up by a qualified electrician. Refer to the wiring diagram for your Fiberglass 30 Hood in *Appendix C: Fiberglass 30 Fume Hood Specifications.*

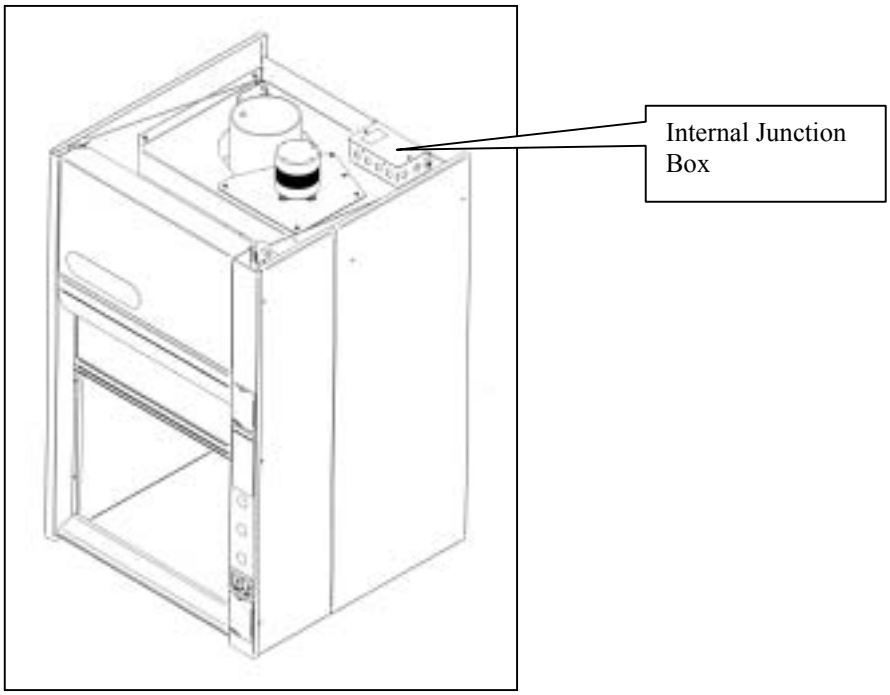


Figure 3-2

All wiring for the fume hood SHOULD be performed by a licensed electrician and conform to all local codes. In most cases, the hood will require the use of shielded conduit to protect the wiring into the hood. The grounding connection shall not be made to the terminal box cover.

The incandescent light has been mounted inside the top liner panel and is sealed from vapors inside the hood structure. To change the incandescent light bulbs in your hood, you must first remove the protective glass. Replace the defective bulbs, and reassemble.

Connecting the Service Lines to the Fiberglass 30 Fume Hood

The hoods with service fixture kits are plumbed from the valve to the hose connector. Supply tubing shall be provided by the qualified installer. Tubing can enter the hood from above, through the back, or through the work surface to make these connections to the service fixtures.

NOTE: Inspect all fittings for leakage. Tighten the fittings slightly if needed.

CAUTION: **Do not use oxygen with any standard service fixture. Contact Labconco Customer Service for oxygen fixture information.**

Should access to the hood plumbing fixture bodies be required, remove the service access plate on the side of the hood by loosening screws. The valve body will be fully exposed for any service work that may be necessary. The service fixture kits on your laboratory hood are designed for use with the following services:

- Air
- Cold Water
- Hot Water
- Natural Gas – See caution below
- Vacuum

WARNING: **Contact Labconco Customer Service directly before using any service other than those listed above in these valves to assure full compatibility.**

CAUTION: Natural gas should be used only in the service fixture that has been pre-plumbed with brass tubing. Sulfur content of the gas could cause deterioration of standard copper supply lines.

Sealing the Fiberglass 30 Hood to the Work Surface

When the hood has been set in place, ducted, wired, and plumbed, it should be sealed at the work surface to prevent spilled materials from collecting under the walls of the hood. Materials such as silicone sealants are recommended to seal the hood structure.

Certifying the Fiberglass 30 Fume Hood

The combination of your laboratory hood, exhaust ductwork, and exhaust blower give you the flexibility to change the airflow at the sash opening of your hood. To determine the actual face velocity at the sash opening, airflow velocity readings will need to be taken. This should be done across the sash opening of the hood in accordance with the *Industrial Ventilation Manual* section on laboratory hoods. (See Appendix D – Reference) Labconco recommends an average face velocity at the sash opening of 80 to 100 feet per minute. Consult Chapter 2 for proper airflow volumes for your particular model.

The Fiberglass 30 Fume Hood has been tested per ASHRAE 110-1995. All hoods achieve an "as manufactured rating" of less than 0.10 part per million (ppm) at 4 liters per minute (lpm); AM<0.10 (consult Labconco for individual fume hood ratings). For "field use" ASHRAE testing by a certified technician, contact Labconco Customer Service.

NOTE: Face velocity profiles and smoke testing should be done periodically to ensure safe performance.

Your Next Step

After your fume hood has been installed and certified, you are ready to proceed to *Chapter 4: Performance Features and Safety Precautions*.

CHAPTER 4
PERFORMANCE FEATURES AND SAFETY PRECAUTIONS

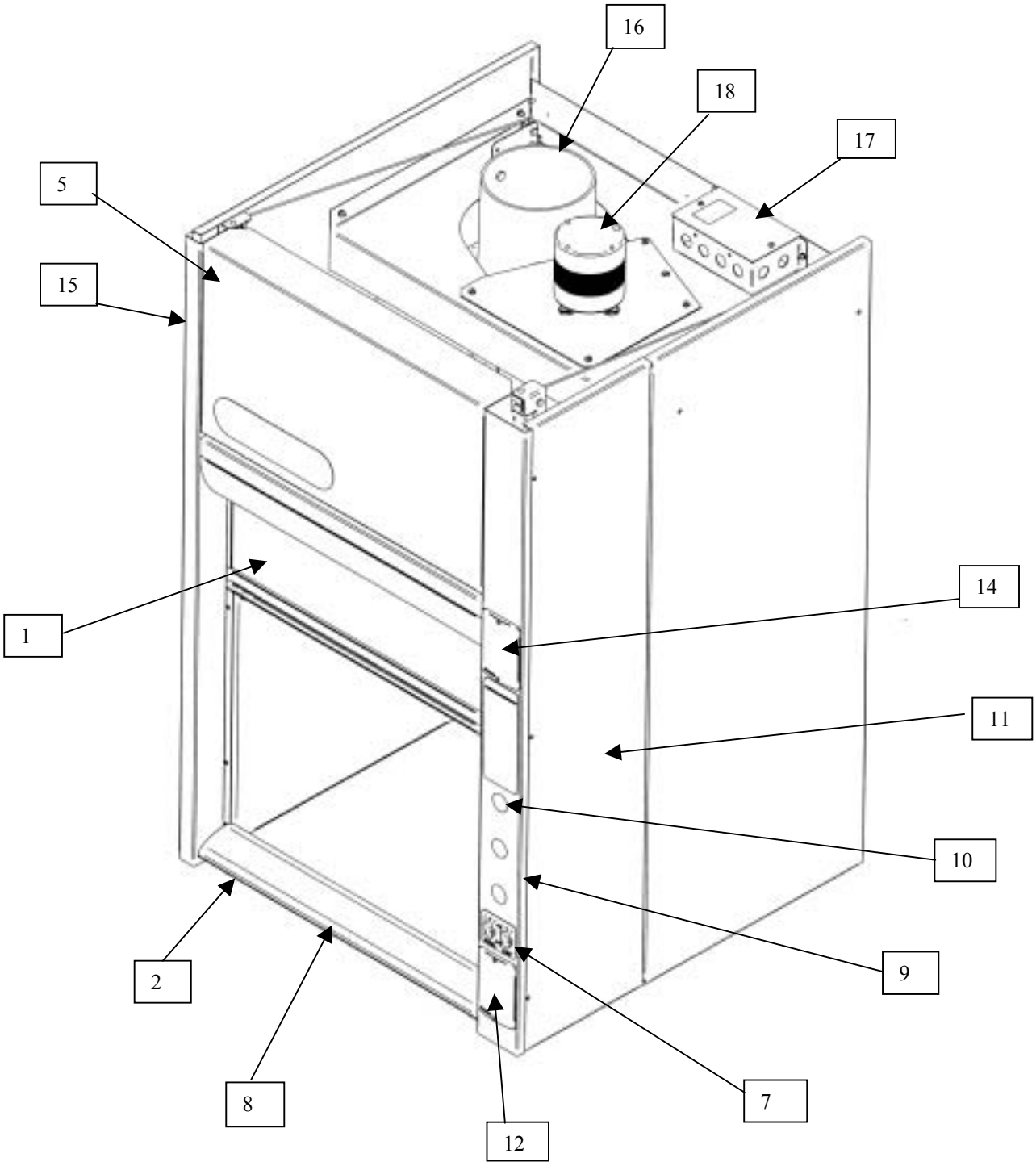
Performance Features:

The Fiberglass 30 Laboratory Hood is designed to meet the needs of the laboratory scientist. A fully featured by-pass hood with baffle and air foil can effectively contain toxic, noxious, or other harmful materials when properly installed. The by-pass airflow feature allows the hood face velocity to remain relatively stable as the sash is closed.

The air foil sweeps the worksurface to remove heavier than air contaminants.

1. **Unique sash provides maximum visibility of 28" high while conserving energy by limiting sash travel to 20"**. Vertical-rising sash may be raised from a closed to 20" operating height. Exhaust volume, and blower sizing is based on the 20" height.
2. **By-pass airflow design** ensures relatively stable face velocities.
3. **Large usable interior work depth and interior height of 36"** provides ample working space.
4. **Baffle** (not shown) directs airflow to the rear of the interior to provide efficient airflow. The baffle may be removed for cleaning purposes only.
5. **Lift-Away™ front panel** provides easy access to electrical wiring, and sash weights.
6. **Incandescent lighting** provides ample illumination inside the fume hood. No lighting is provided on explosion proof models.
7. **Low mounted, factory-wired light and blower switches** are ADA compliant. No switches are provided on explosion-proof models.
8. **Curved Air Foil** allows air to sweep the work surface for maximum containment.
9. **Corner posts** provide maximum visibility and the flexibility to add services after installation.
10. **All hoods are factory prepared for up to 3 service fixtures**. Field installed by removing side access panel.
11. **Removable side access panel** for servicing valves and electrical connections.
12. **All hoods are factory prepared for one electrical duplex.** A duplex can be field mounted on the right corner post. Receptacles are field-wired to the single point junction box.
13. **Shipped fully assembled** and eliminates the need for costly onsite assembly.

14. **Accessory Guardian™ Digital Airflow Monitor** or **Guardian Jr. Monitor** continuously monitors face velocity. An audio/visual alarm alerts the user to low airflow conditions. The right corner post is factory prepared to accommodate the Guardian Monitor (sold separately).
15. **Frame of epoxy-coated steel and aluminum** is durable and corrosion resistant.
16. **Exhaust connection**. The hood features 6" (6.625" OD pipe) exhaust connections sized to allow for a minimum static pressure loss through the hood structure while providing a good transport velocity through the exhaust system.
17. **Single point junction box** provides a single connection point for electrical wiring connections.
18. **Convenient integral blower motor** is readily accessible on integral blower models.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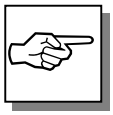
Safety Precautions

Although the laboratory hood has been engineered to maintain optimum operator safety, caution should always be used while working in the hood. Prior to using the hood, check to make sure that the exhaust blower is operating and that air is entering the hood at its specified face velocity.



USE GOOD HOUSEKEEPING IN THE HOOD AT ALL TIMES. CLEAN UP SPILLS IMMEDIATELY. PERIODICALLY CLEAN HOOD INTERIOR, INCLUDING LIGHT GLASS PANEL. REPLACE BURNED OUT LIGHT BULBS TO MAINTAIN MAXIMUM ILLUMINATION.

DO NOT OVERLOAD THE WORK SURFACE WITH APPARATUS OR WORK MATERIAL. THE SAFE OPERATION OF THE LABORATORY HOOD IS BASED UPON HAVING PROPER AIRFLOW THROUGH THE STRUCTURE. DO NOT PLACE LARGE, BULKY OBJECTS SUCH AS BLOCK HEATERS, DIRECTLY ON THE HOOD WORK SURFACE. INSTEAD, ELEVATE THE OBJECT 2" TO 3" ON BLOCKS TO ALLOW A FLOW OF AIR UNDER THE OBJECT AND INTO THE LOWER REAR BAFFLE EXHAUST SLOT. ENSURE BLOCKS ARE LEVEL AND SECURED IN PLACE.

Blocking the bottom of the baffle at the rear of hood will change the airflow pattern in the hood causing turbulence and possible leakage at the face of the hood. (Don't store containers or supplies against the baffle, as this will affect airflow through the hood).

Avoid placing your head inside hood. Keep hands out of hood as much as practical.

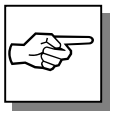
Always work as far back in the hood as possible. It is best to keep all chemicals and apparatus 6" inside the front of the hood.

Only explosion-proof models feature explosion-proof electrical components. Therefore, use of flammable or explosive materials in quantities above the explosive limit are not recommended.

Do not work with chemicals in this hood without the exhaust system running. Do not store chemicals in a fume hood.

Perchloric acid use in this hood is prohibited.

High-level radioisotope materials are prohibited for use in this hood.



AVOID CROSS DRAFTS AND LIMIT TRAFFIC IN FRONT OF THE HOOD. AIR DISTURBANCES CREATED MAY DRAW FUMES OUT OF THE HOOD.

The use of heat-generating equipment in this hood without the exhaust system operating properly can cause damage to the hood.

The Fiberglass 30 Laboratory Hood should be certified by a qualified certification technician before it is initially used. The hood should be re-certified whenever it is relocated, serviced or at least annually thereafter.

Ensure that the unit is connected to electrical service in accordance with local and national electrical codes. Failure to do so may create a fire or electrical hazard. Do not remove or service any electrical components without first disconnecting the hood from electrical service.

Proper operation of the fume hood depends largely upon the hood's location and the operator's work habits. Consult the *Reference Manual in Appendix D.*

Your Next Step

After you understand the theory of operation and safety precautions, you are ready to proceed to *Chapter 5: Using Your Fiberglass 30 Fume Hood*.

CHAPTER 5
USING YOUR FIBERGLASS 30 FUME HOOD

Operating the Vertical-Rising Sash

Because of the Fiberglass 30 Hood counterbalanced sash mechanism, it will take only a few pounds of force to move the sash up or down, and you can operate the sash smoothly with one or two hands positioned any where along the handle. The vertical-rising sash may be raised to a maximum 20" operating height. The airflow requirements should be sized for the 20" operating height.

Operating the Blower

Your Fiberglass 30 Fume Hood utilizes a remote style blower or integral blower, which can be activated by turning the blower switch to "ON." You can validate the hood performance by watching smoke drawn into the hood face opening. Explosion-proof models do not have a switch or wiring as this is field installed.

Operating the Lights

Your Fiberglass 30 Fume Hood is equipped with a factory-wired incandescent light to illuminate the hood interior. Simply turn the light switch to "ON" to operate. Explosion-proof models do not have a light.

Working in your Fiberglass 30 Fume Hood

Planning

- Thoroughly understand procedures and equipment required before beginning work.
- Arrange for minimal disruptions, such as room traffic or entry into the room while the hood is in use.

Start-up

- Turn on incandescent light and hood blower.
- Slowly raise the sash.
- Check the baffle air slots for obstructions.
- Allow the hood to operate unobstructed for 5 minutes.
- Wear a long sleeved lab coat and rubber gloves. Use protective eyewear. Wear a protective mask if appropriate.

Loading Materials and Equipment

- Only load the materials required for the procedure. Do not overload the hood.
- Do not obstruct the front air foil, or rear baffle slots.
- Large objects should not be placed close together and spaced above the work surface to permit airflow to sweep under the equipment.

- After loading the hood, wait one minute to purge airborne contaminants from the work area.

Work Techniques

- Keep all materials at least 6 inches inside of the sash, and perform all contaminated operations as far to the rear of the work area as possible.
- Segregate all clean and contaminated materials in the work area.
- Avoid using techniques or procedures that disrupt the airflow patterns of the hood.

Final Purging

- Upon completion of work, the hood should be allowed to operate for two to three minutes undisturbed, to purge airborne contaminants from the work area before shutting down blower.

Unloading Materials and Equipment

- Objects in contact with contaminated material should be surface decontaminated before removal from the hood.
- All open trays or containers should be covered before being removed from the hood.

Shutdown

- Turn off the incandescent light and hood blower, and then close the sash.

Your Next Step

After you understand how to operate and work in the fume hood, you are ready to proceed to *Chapter 6: Maintaining Your Fiberglass 30 Fume Hood*.

CHAPTER 6 MAINTAINING YOUR FIBERGLASS 30 FUME HOOD

Now that you have an understanding of how to work in the fume hood, we will review the suggested maintenance schedule and the common service operations necessary to maintain your fume hood for peak performance.

Only trained and experienced certification technicians should perform some of the service operations after the fume hood has been properly decontaminated. DO NOT attempt to perform these operations if you are not properly trained. The wrench icon precedes the service operations that require qualified technicians.

Routine Maintenance Schedule

Weekly

- Using ordinary dish soap to clean the surface inside of the fume hood, and the work surface.
- Using an appropriate glass cleaner, clean the sash and all glass surfaces.
- Operate the fume hood blower, noting the airflow velocity through the hood using a source of visible smoke.

Monthly (or more often as required)

- Determine the actual face velocity through the sash opening of the hood where the average reading should be at the specified velocity. (Use calibrated thermal anemometer or other approved apparatus).
- Using a damp cloth, clean the exterior surfaces of the hood, particularly the front of the hood, to remove any accumulated dust.
- Check all service valves, if so equipped, for proper operation.
- The hood baffles should be checked for blockages behind them to ensure that the hood is maintaining proper airflow.
- All weekly activities.

Annually

- Have the fume hood recertified by a qualified certification technician. See *Certifying the Fiberglass 30 Fume Hood in Chapter 3*.
- All monthly activities.

Biannually

- The sash assembly should be checked to ensure proper operation and to make sure there are no signs of abnormal wear on the sash pulleys, cables and clamps.

Routine Service Operations

Front Panel Removal:

1. Simply lift the front panel up and then away from the hood to provide access to the top.

Changing the Incandescent Lamp:

1. Turn light switch to “OFF”.
2. Raise the sash and reach inside the fume hood to unscrew the clear glass globe that protects the incandescent bulb.
3. Install the new incandescent bulb and then reverse the removal procedure.

Your Next Step

After you understand the maintenance procedures, you are ready to proceed to *Chapter 7: Modifying Your Fiberglass 30 Fume Hood*.

CHAPTER 7
MODIFYING YOUR FIBERGLASS 30 FUME HOOD

There are several ways to modify the fume hood for your individual requirements. These include the addition of work surfaces, service fixtures, air monitor, and electrical duplex outlets. See *Appendix A: Fiberglass 30 Hood Components* for installation location.

Installing Work Surfaces and Storage Cabinets

An optional work surface is available when installing the hood on storage cabinets. Contact Labconco Customer Service for ordering information on these 30" work surfaces and storage cabinets.

4882806	Work Surface	30" x 30"
9902200	Solvent Cabinet	30"
9901200	Acid Cabinet	30"
9900200	Base Cabinet	30"

Installing Additional Service Fixtures

Additional service fixtures can be installed in the available service fixture holes in the right sidewall and corner post. The fume hood is factory set to accept up to three valves. Contact Labconco Customer Service for information. The following service fixture kits are available:

2832600	Cold Water (CW) – Green
2832601	Hot Water (HW) – Red
2832602	Deionized Water (DW) – White
2832603	Vacuum (VAC) – Yellow
2832604	Air (AIR) – Orange
2832605	Gas (GAS) – Blue
2832606	Nitrogen (NIT) – Brown
2832607	Argon (ARG) – Gray
2832608	Steam (STM) - Black

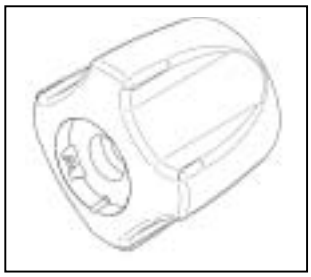


Figure 7-1 - Knob

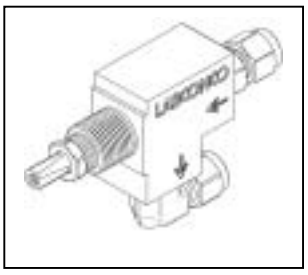


Figure 7-2 - Valve

Figure 7-3 – Hose Connector

Installing Guardian™ Digital Airflow Monitor or Guardian™ Jr. Airflow Monitor

The Guardian Digital Airflow Monitor P/N 9743201 and 9743205 or Guardian Jr. Airflow Monitor P/N 9743202 and 9743206 allows you to continuously monitor face velocity through the fume hood opening. The fume hood right corner post is factory prepared to mount either monitor. Contact Labconco Customer Service to order.

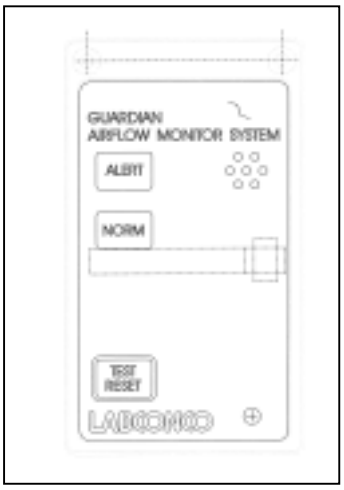


Figure 7-4

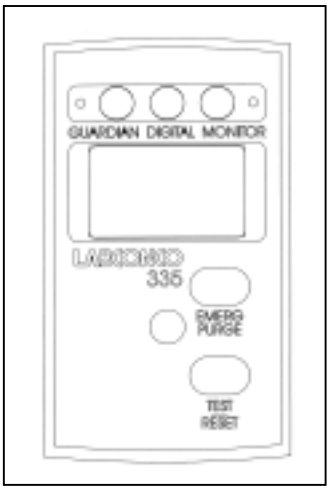


Figure 7-5

Installing an Electrical Duplex Receptacle

If you ordered your hood and want an electrical duplex outlet, then you can have one installed in the field by a qualified electrician. Contact Labconco Customer Service for ordering information. (Not acceptable on explosion-proof hoods). The following duplex kits are available:

2834800 115V, 20A Duplex Kit
2834801 115V, 20A GFCI Duplex Kit

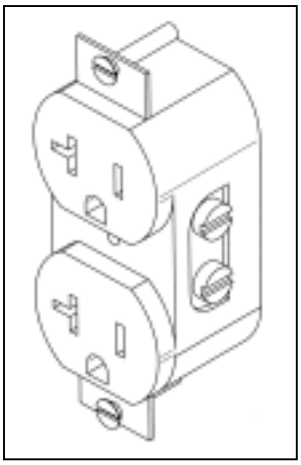


Figure 7-6

Your Next Step

After you understand the modifying procedures, you are ready to proceed to *Chapter 8: Troubleshooting*.

CHAPTER 8
TROUBLESHOOTING

Refer to the following table if your fume hood fails to operate properly. If the suggested corrective actions do not solve your problem, contact Labconco for additional assistance.

PROBLEM	CAUSE	CORRECTIVE ACTION
Remote blower and light won't operate	Wires not connected at junction box or switches.	Check connection of switches.
		Check connection to control box on top of unit.
	Circuit breakers tripped in building electrical supply.	Reset circuit breakers.
Remote blower won't operate, but light works	Blower wiring is disconnected.	Inspect blower wiring and switch.
	Belt broken.	Replace belt.
	Blower motor is defective.	Replace blower motor.
Fume hood blower operates but light will not operate	Lamp not installed correctly.	Inspect lamp installation.
	Lamp is defective.	Replace lamp.
	Circuit breaker in building is tripped.	Reset the circuit breaker.

PROBLEM	CAUSE	CORRECTIVE ACTION
Fume hood blower operates but light will not operate	Lamp wiring is disconnected.	Inspect lamp wiring.
	Defective lamp.	Replace lamp.
Contaminants outside of fume hood	Improper user techniques for the fume hood.	See "Certifying the Hood" Chapter 3 and "Safety Precautions" Chapter 4 sections in the manual. (Ref. Appendix D)
	Restriction of the baffle air slots or blockage of the exhaust outlet.	Remove baffles to ensure that all air slots and the exhaust outlet are unobstructed.
	External factors are disrupting the fume hood airflow patterns or acting as a source of contamination.	See "Location Requirements" Chapter 2, "Certifying the Hood" Chapter 3, and "Safety Precautions" Chapter 4 sections of this manual. (Ref. Appendix D)
	Fume hood has improper face velocity.	Have fume hood re-certified and check remote blower exhaust system. Hood should have average face velocity of 80-100 fpm.
Vertical-rising sash no longer operates smoothly	Cable is frayed or plastic protection is damaged.	Inspect cable and replace cable if worn or damaged immediately; otherwise injury could result.
	Pulley bearing is damaged.	Replace pulley, bearing or add grease.
	Cable has slipped off the pulleys.	Re-install, cable must be replaced immediately if damaged.
	Weight has broken pulleys.	Replace weight pulleys.

PROBLEM	CAUSE	CORRECTIVE ACTION
Electrical duplex outlet no longer has power	Wires not connected or faulty duplex.	Check wire connection or replace duplex.
	Circuit breakers tripped in building electrical supply.	Reset circuit breakers.
Service valves no longer operate	Faulty building supply.	Inspect building supply shut off valves and appropriate pressures below 40 PSI.
	Valve no longer operates.	Replace valve and check for leaks.
	Supply line or outlet line has leaks.	Inspect line for leaks and fix any leaking plumbing connections.

APPENDIX A
FIBERGLASS 30
HOOD COMPONENTS

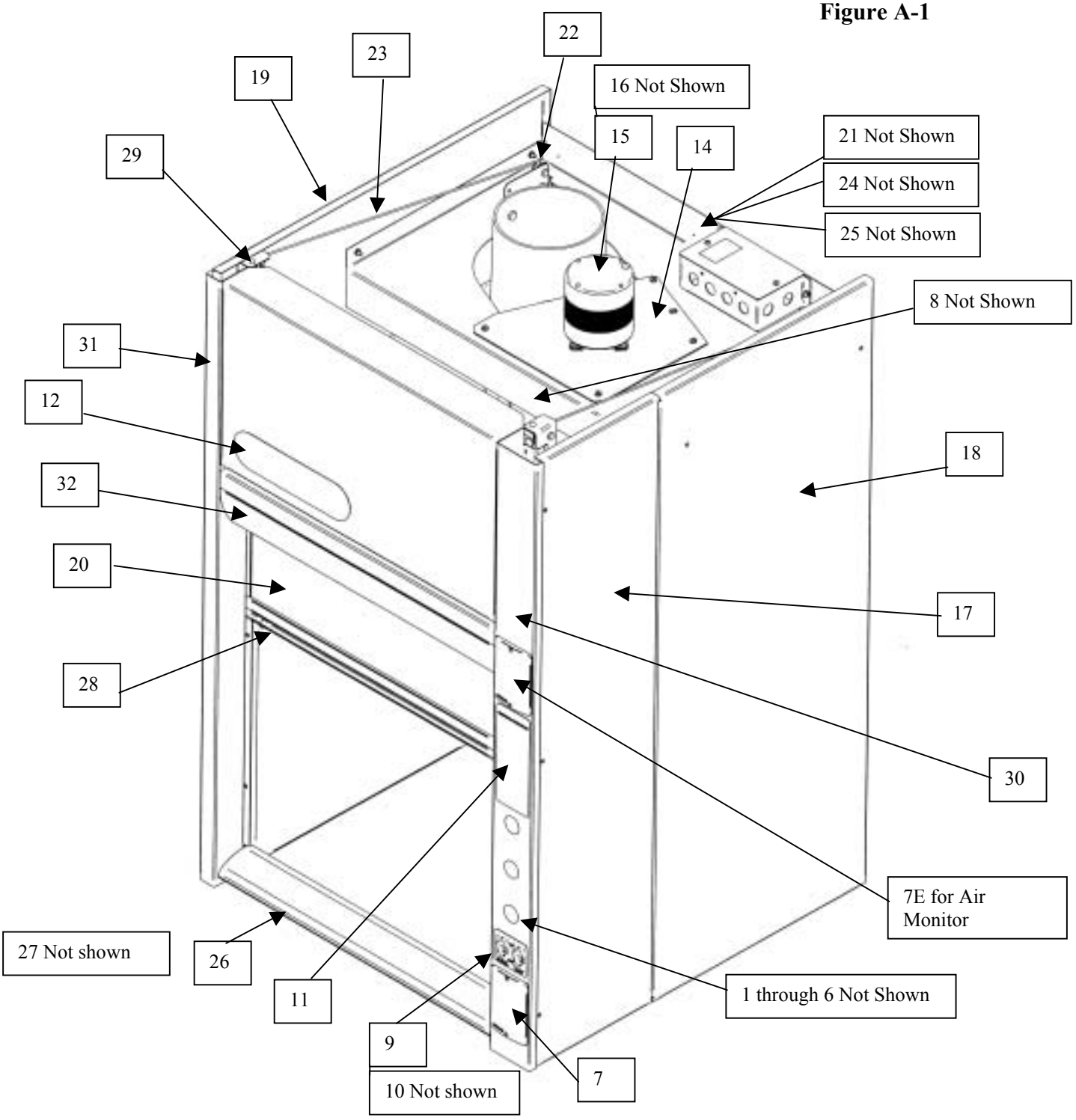
Illustration A-1 indicate the location of the following service parts:

Fiberglass 30 Hood Replacement Parts

Item	Quantity	Part No.	Description
1A	1	9817000	Valve, Labconco ¼" Compression Fitting
1B	1	9817002	Valve, Labconco Deionized ¼" Compression Fitting
1C	1	9818000	Nut, Valve Mtg. (Labconco)
2	1	9818700-01-02-03-04-05-06-07-08	Knobs (Gray, Green, Blue, Orange, Yellow, Red, White, Black, Brown)
3A	1	9818800	Hose Barb, Gray – Neutral or Argon – NOT SHOWN
3B	1	9818801	Hose Barb, Green – Cold Water – NOT SHOWN
3C	1	9818802	Hose Barb, Blue – Gas – NOT SHOWN
3D	1	9818803	Hose Barb, Orange – Air – NOT SHOWN
3E	1	9818804	Hose Barb, Yellow – Vacuum – NOT SHOWN
3F	1	9818805	Hose Barb, Red – Hot Water – NOT SHOWN
3G	1	9818806	Hose Barb, White – Deionized Water – NOT SHOWN
3H	1	9818807	Hose Barb, Black – Neutral or Steam – NOT SHOWN
3I	1	9818808	Hose Barb, Brown – Nitrogen – NOT SHOWN
3J	1	9819000	Nut, Hose Barb – NOT SHOWN
4	1	9825500	Label, Knob (contains all labels)
5	1	9818900	Lens, Knob
6A	1	2832600	Fixture Kits – (CW)
6B	1	2832601	Fixture Kits – (HW)
6C	1	2832602	Fixture Kits – (DI)
6D	1	2832603	Fixture Kits – (VAC)
6E	1	2832604	Fixture Kits – (AIR)
6F	1	2832605	Fixture Kits – (GAS)
6G	1	2832606	Fixture Kits – (NIT)
6H	1	2832607	Fixture Kits – (ARG)
6I	1	2832608	Fixture Kits – (STM)
7A	1	2834800	115V, 20A Duplex Kit
7B	1	2834801	115V, 20A GFCI Duplex Kit

Item	Quantity	Part No.	Description
7C	1	9818200	Cover Plate 115V Duplex
7D	1	9818100	Cover Plate, 115V GFCI
7E	1	9818300	Wallplate, Blank
8A	1	1273600	Bulb, 115V
8B	1	1273700	Bulb, 230V
8C	1	4849800	Light Fixture Assy complete with wiring, parts 8D through 8G
8D	1	4849900	Light Fixture – a) Body & Socket VFB15, b) Pendent Cover 1/2" VP1, c) Globe, 150W, 264–0006-9909
8E	1	4850000	Wiring Harness, Light
8F	1	1279700	Gasket, Base
8G	1	1279800	Gasket, Globe
9A	1	1302300	Switch, Rocker
9B	1	1327500	Switch, Plug (Fills cutout without switch)
10A	1	2834400	Wiring Harness, Main 115V
10B	1	2834500	Wiring Harness, Main 230V
11	1	2834000	Label Set, Corner Post
12	1	2834100	Label, Front Panel
13	1	2831400	Front Panel
14A	1	2833000	Motor Plate – 115V only
14B	1	2831700	Motor Plate, 230V, 115V, EP - 230V, EP
15A	1	2807100	Motor, 115V
15B	1	1203600	Motor, 230V
15C	1	1200400	Motor, 115 VEP
15D	1	1211000	Motor, 230V EP
15E	1	1852300	Reducing Bushing – 230V only
15F	4	1662600	Rubber Grommet – 115V only
16A	1	1450000	Wheel, Blower – 115V only
16B	1	4716200	Wheel, Blower – 230V, 115V – EP, 230V – EP
17	1	2833400	Removable Side Panel – Right
18	1	2831900	Side Panel – Right
19	1	2832000	Side Panel – Left
20	1	2832500	Sash Glass Assembly
21	1	2833800	Sash Weight
22A	1	1861400	Pulley – 1-3/16" Dia.
22B	1	3627500	Thrust Washer
23	2	4949902	Cable, Sash
24	4	1920100	Clamp, Cable Replacement
25	2	1972100	S-Hook
26	1	2831500	Air Foil
27	2	1934300	Air Foil Spacer Stop
28	2	9713300	Rubber Bumper – Sash Handle
29A	1	2833500	Bracket, Cable Front – Right
29B	1	2833501	Bracket, Cable Front – Left
29C	1	1663200	Rubber Bumper – Upper Sash Stop
30	1	2831100	Corner Post, Right
31	1	2831200	Corner Post, Left
32	1	2831300	Header
30	1	9724500	Sash Stop Kit
31	1	1663200	Upper Sash Bumper
32	1	2831300	Header

Figure A-1


22
23
19
16 Not Shown
15
14
21 Not Shown
24 Not Shown
25 Not Shown
29
8 Not Shown
31
12
18
32
20
17
28
30
7E for Air Monitor
27 Not shown
26
11
1 through 6 Not Shown
9
7
10 Not shown

APPENDIX B
FIBERGLASS 30 HOOD DIMENSIONS

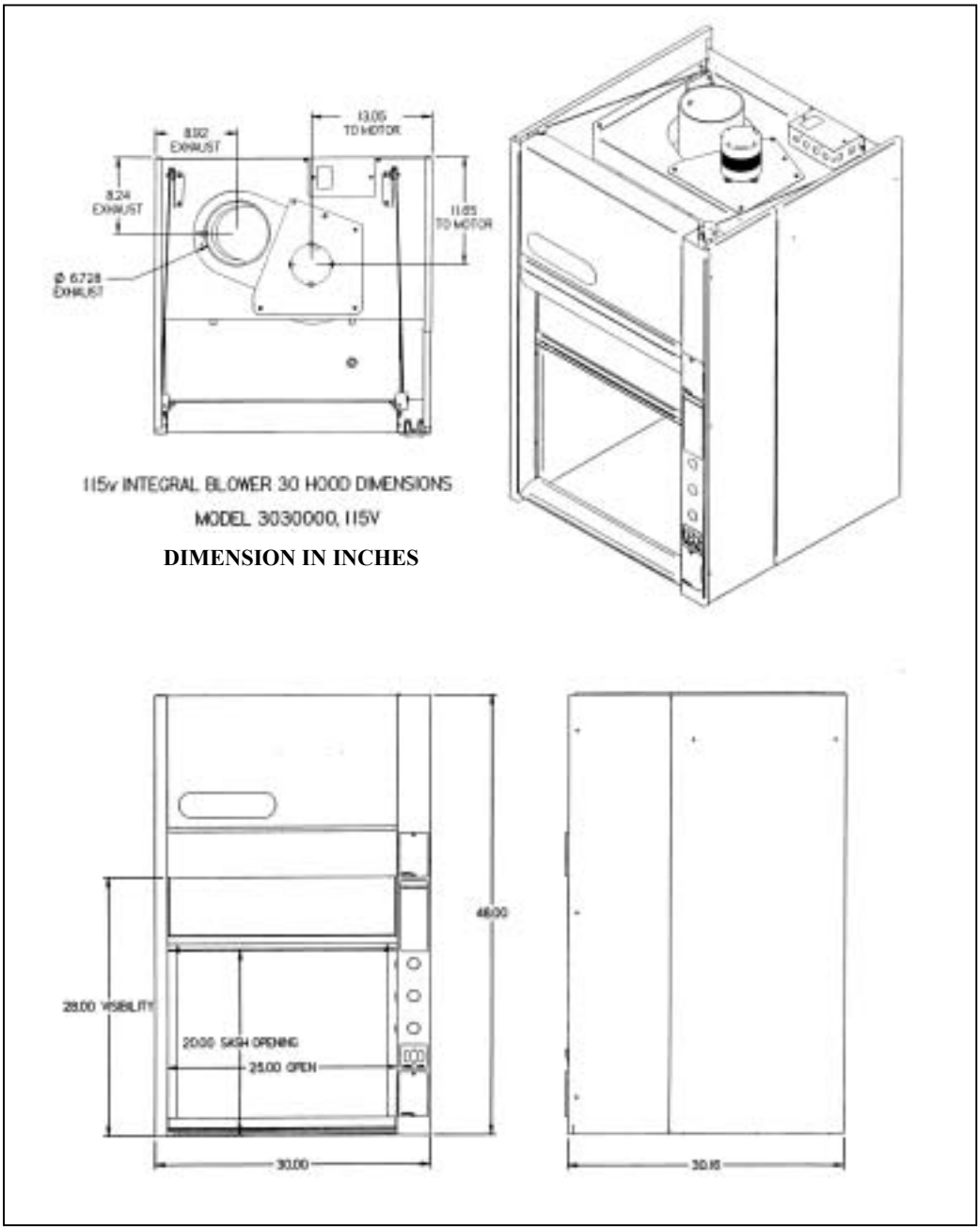


Figure B-1

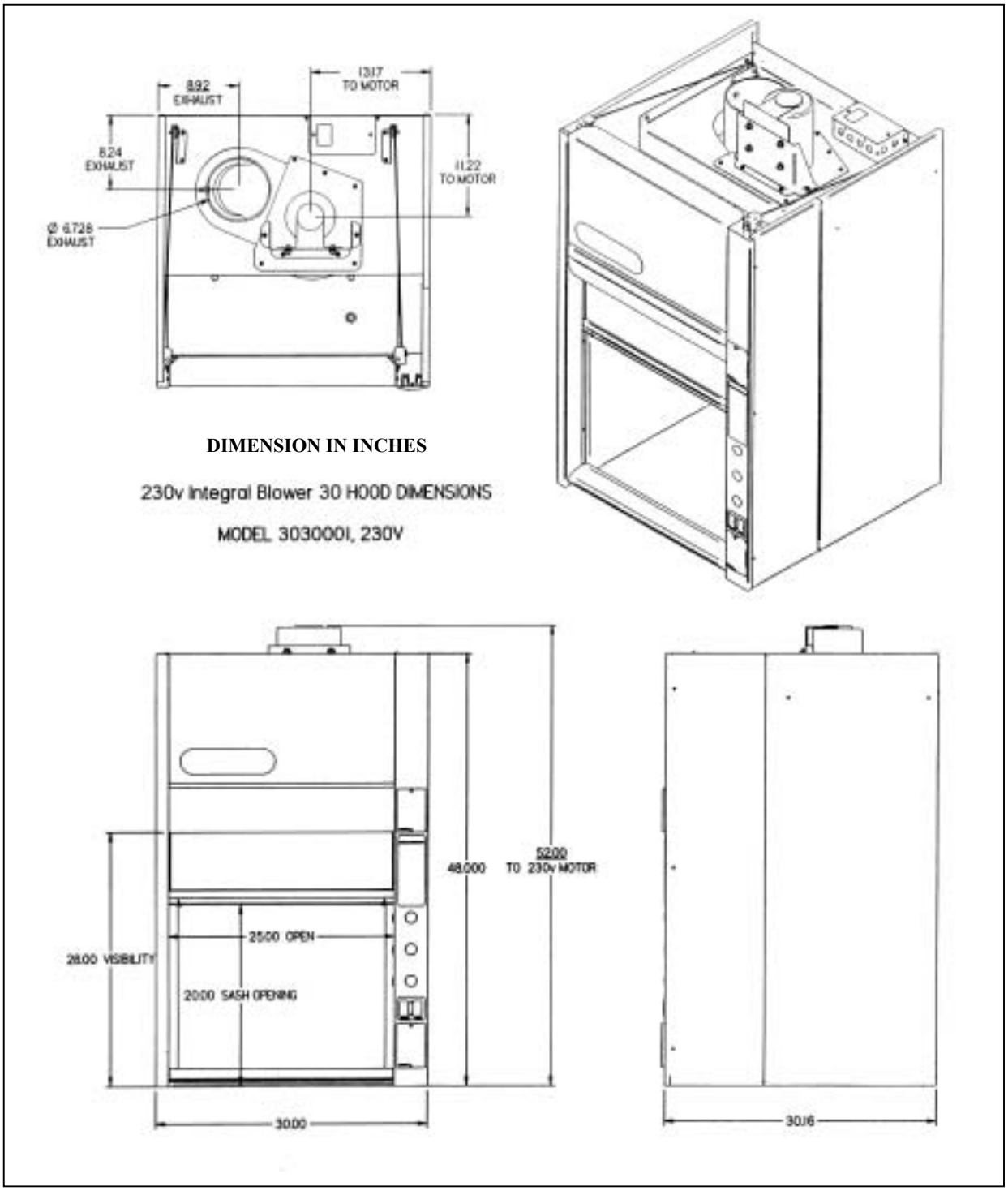

8.92
EXHAUST
13.17
TO MOTOR
8.24
EXHAUST
11.22
TO MOTOR
Ø 6.726
EXHAUST
DIMENSION IN INCHES
230v Integral Blower 30 HOOD DIMENSIONS
MODEL 3030001, 230V
48.000
52.00
TO 230v MOTOR
25.00 OPEN
28.00 VISIBILITY
20.00 SASH OPENING
30.00
30.16

Figure B-2

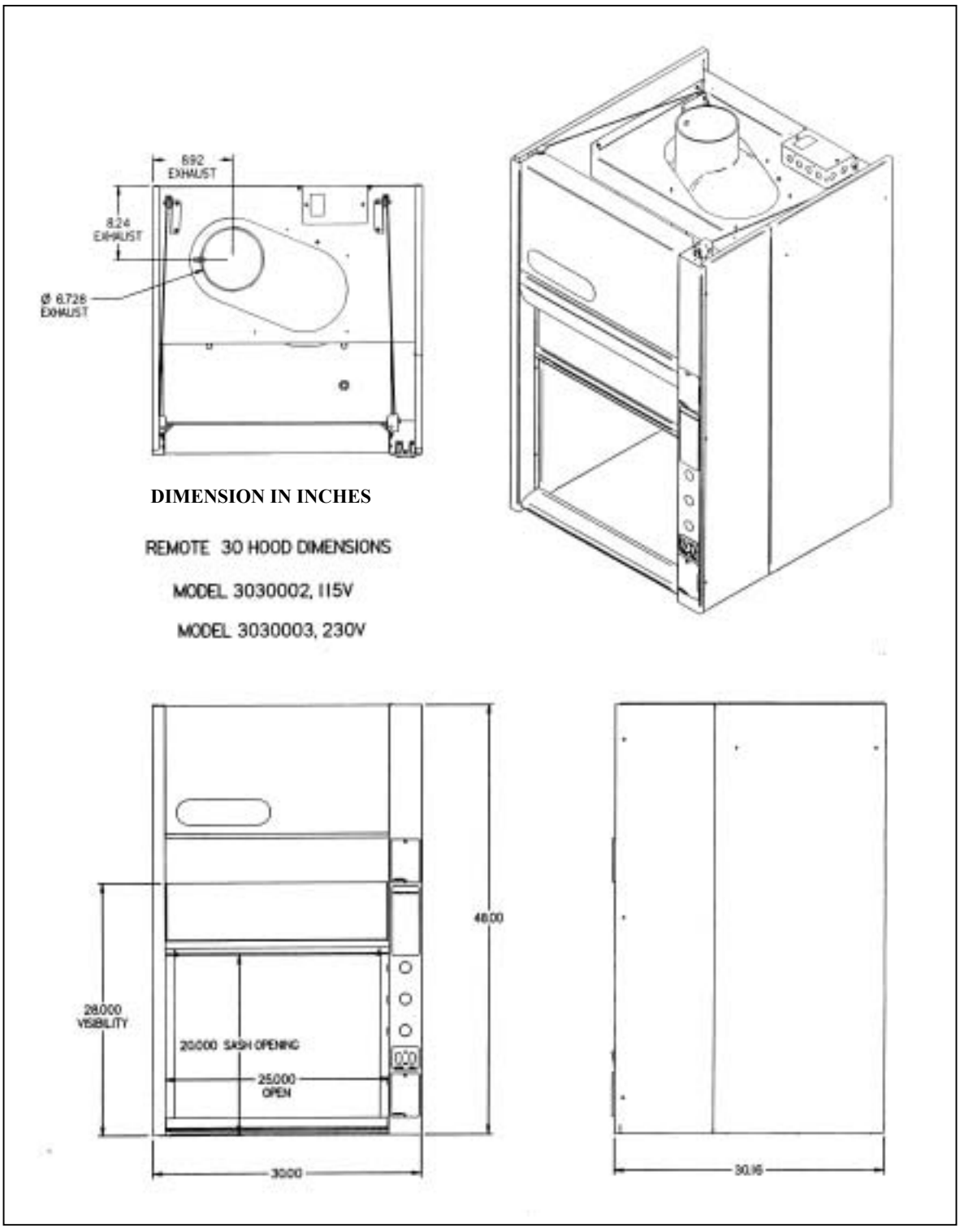

8.92
EXHAUST
8.24
EXHAUST
Ø 6.726
EXHAUST
DIMENSION IN INCHES
REMOTE 30 HOOD DIMENSIONS
MODEL 3030002, 115V
MODEL 3030003, 230V
48.00
28.000
VISIBILITY
20.000 SASH OPENING
25.000
OPEN
30.00
30.16

Figure B-3

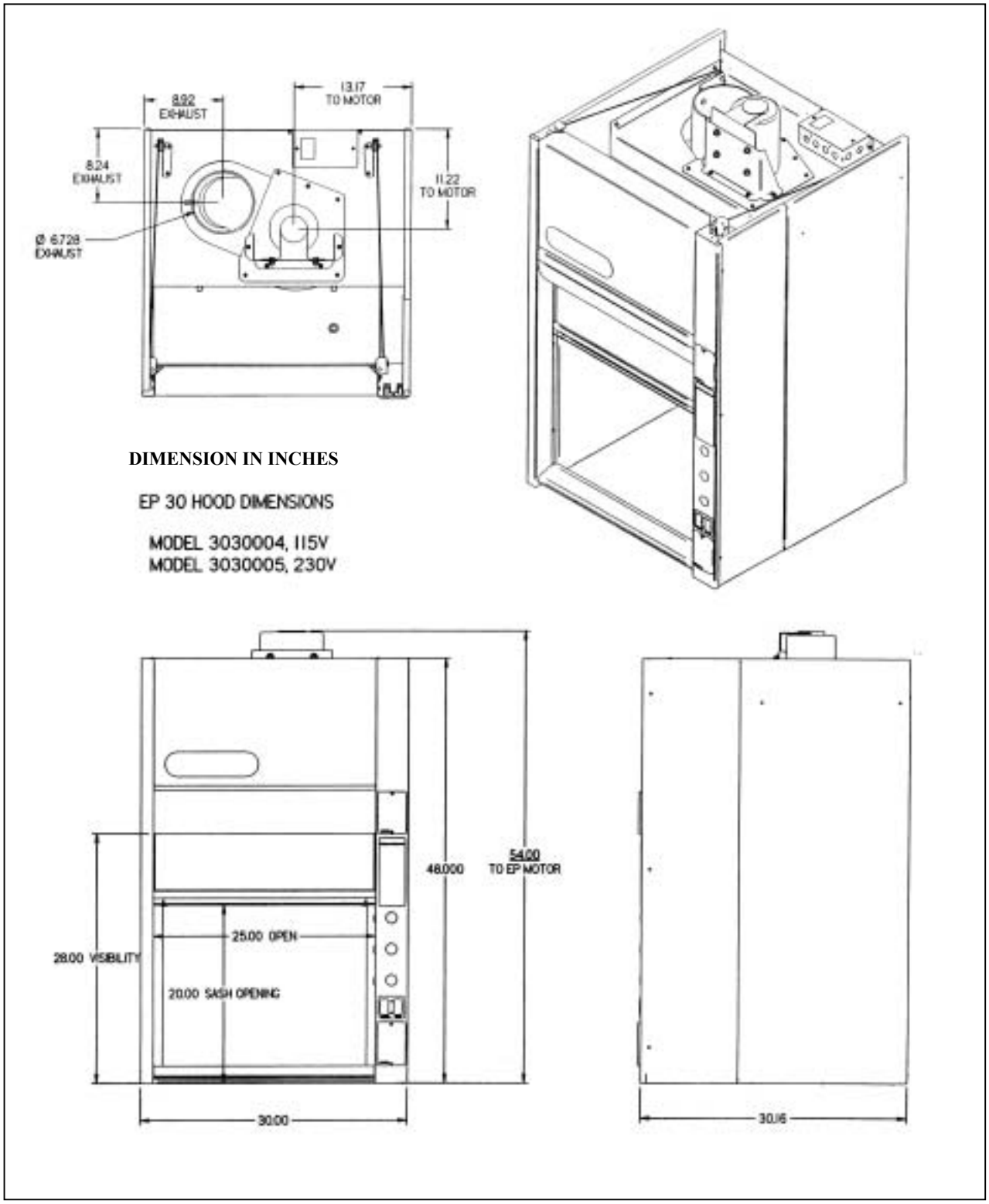

8.92
EXHAUST
13.17
TO MOTOR
8.24
EXHAUST
11.22
TO MOTOR
Ø 6.728
EXHAUST
DIMENSION IN INCHES
EP 30 HOOD DIMENSIONS
MODEL 3030004, 115V
MODEL 3030005, 230V
48.000
54.00
TO EP MOTOR
25.00 OPEN
28.00 VISIBILITY
20.00 SASH OPENING
30.00
30.06

Figure B-4

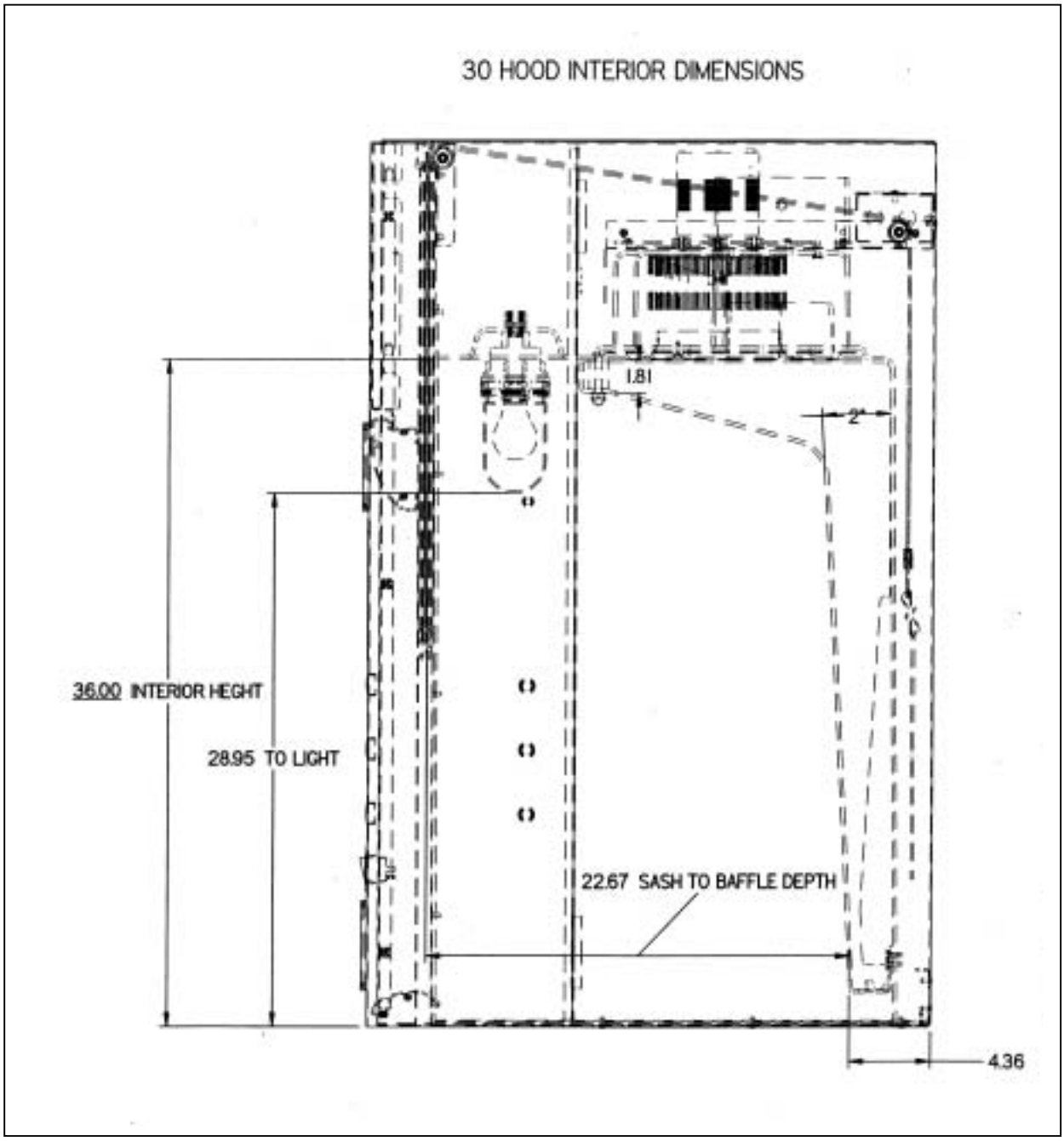
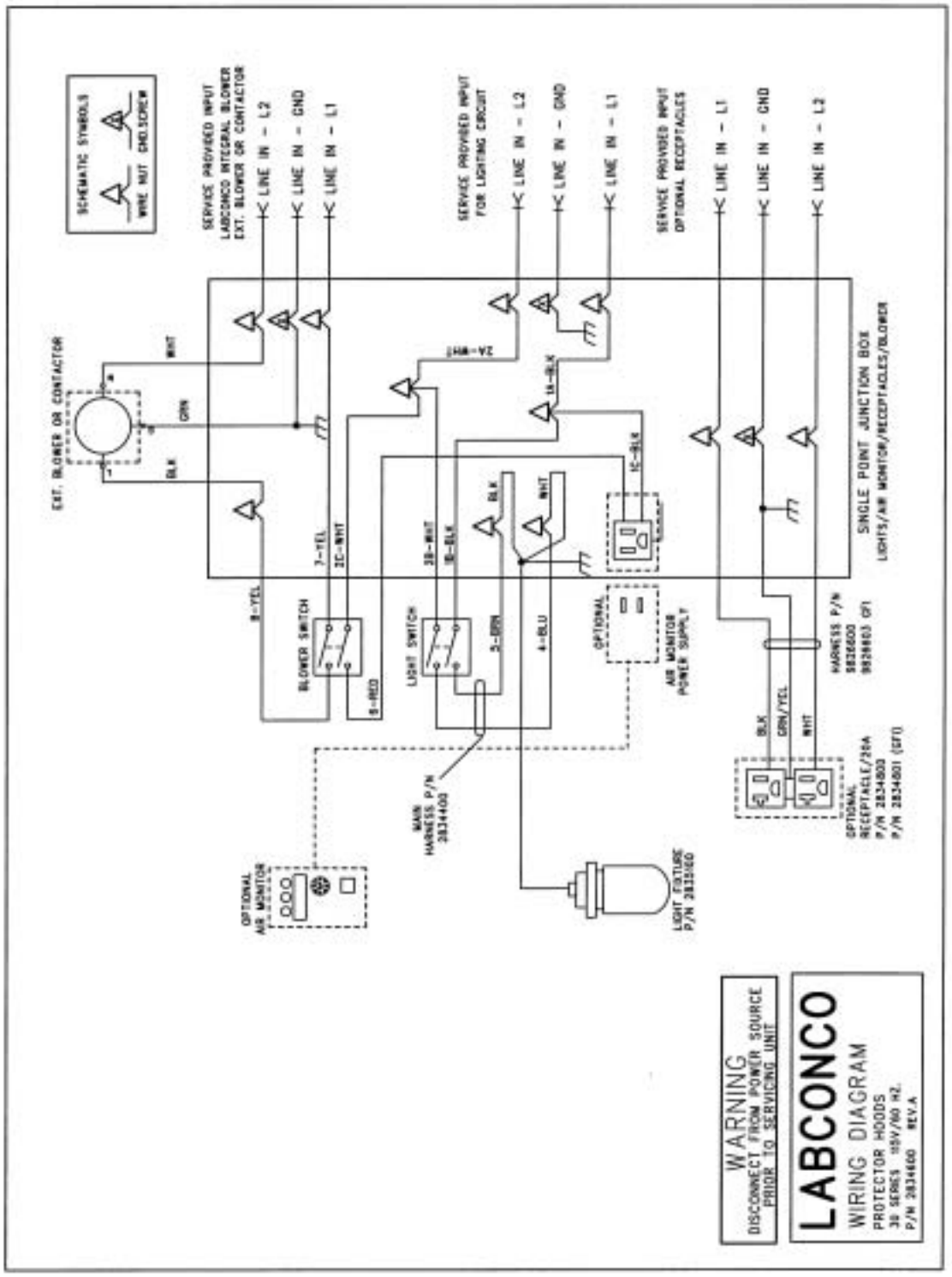

30 HOOD INTERIOR DIMENSIONS
1.81
2"
36.00 INTERIOR HEGHT
28.95 TO LIGHT
22.67 SASH TO BAFFLE DEPTH
4.36

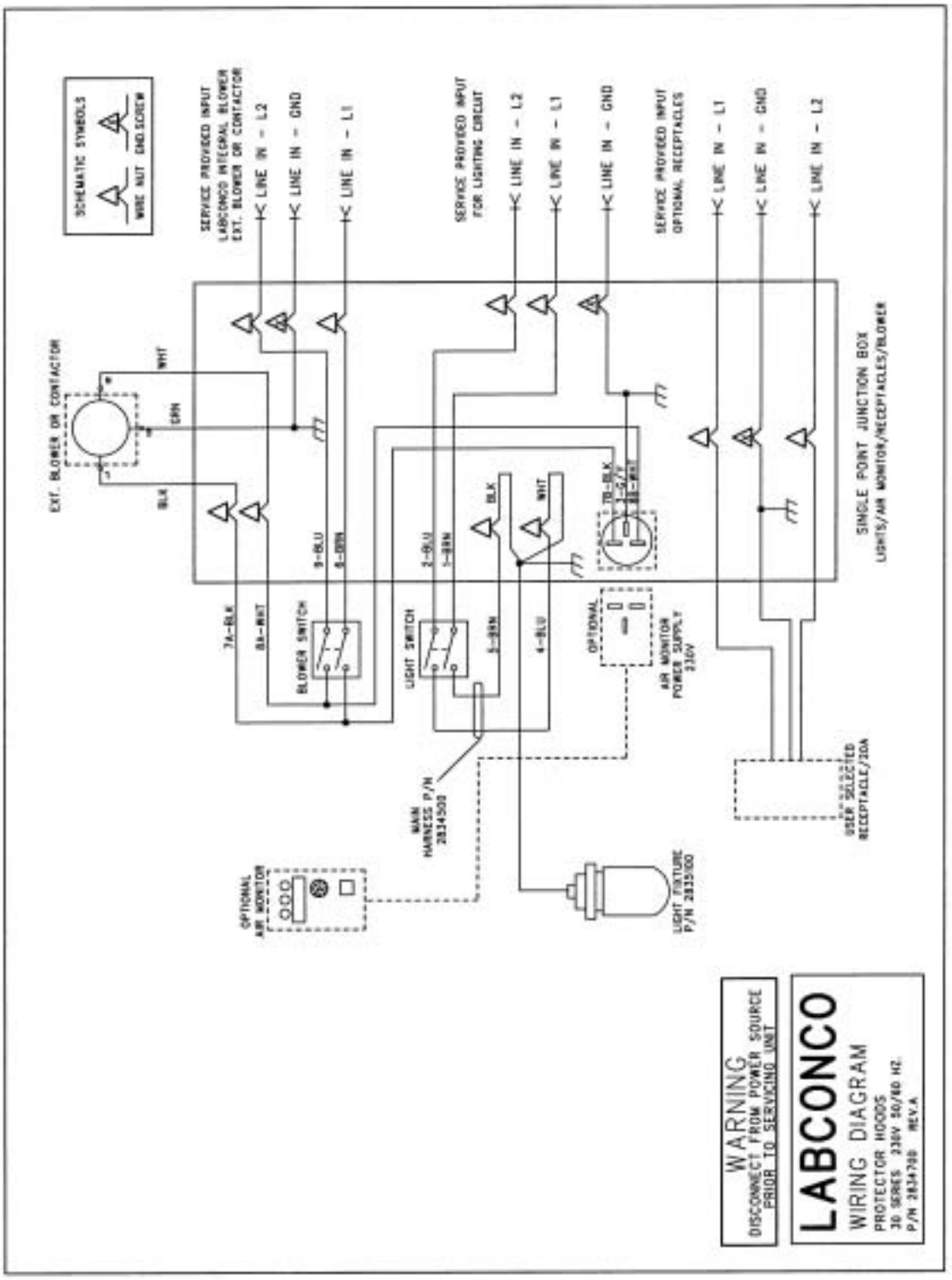
Figure B-5

APPENDIX C FIBERGLASS 30 FUME HOOD SPECIFICATIONS

Environmental Conditions

- Indoor use only.
- Maximum altitude: 6562 feet (2000 meters).
- Ambient temperature range: 41° to 104°F (5° to 40°C).
- Maximum relative humidity: 80% for temperatures up to 88°F (31°C), decreasing linearly to 50% relative humidity at 104°F (40°C).
- Main supply voltage fluctuations not to exceed ±10% of the nominal voltage.
- Transient over-voltages according to Installation Categories II (Over-voltage Categories per IEC 1010). Temporary voltage spikes on the AC input line that may be as high as 1500V for 115V models and 2500V for 230V models are allowed.
- Used in an environment of Pollution degrees 2 (i.e., where normally only non-conductive atmospheres are present). Occasionally, however, a temporary conductivity caused by condensation must be expected, in accordance with IEC 664.


SCHEMATIC SYMBOLS
WIRE NUT
ENCLOSURE
SERVICE PROVIDED INPUT
LABCONCO INTEGRAL BLOWER
EXT. BLOWER OR CONTACTOR
LINE IN - L2
LINE IN - GND
LINE IN - L1
SERVICE PROVIDED INPUT
FOR LIGHTING CIRCUIT
LINE IN - L2
LINE IN - GND
LINE IN - L1
SERVICE PROVIDED INPUT
OPTIONAL RECEPTACLES
LINE IN - L1
LINE IN - GND
LINE IN - L2
EXT. BLOWER OR CONTACTOR
WHT
GRN
BLK
SINGLE POINT JUNCTION BOX
LIGHTS/AIR MONITOR/RECEPTACLES/BLOWER
BLOWER SWITCH
LIGHT SWITCH
OPTIONAL
AIR MONITOR
POWER SUPPLY
HARNESS P/N
5836600
5836601 (EF)
OPTIONAL
RECEPTACLE/20A
P/N 2834600
P/N 2834601 (EF)
BLK
GRN/YEL
WHT
MAIN
HARNESS P/N
2834400
OPTIONAL
AIR MONITOR
LIGHT FIXTURE
P/N 2835160
WARNING
DISCONNECT FROM POWER SOURCE
PRIOR TO SERVICING UNIT
LABCONCO
WIRING DIAGRAM
PROTECTOR HOODS
30 SERIES 115V/60 HZ.
P/N 2834600 REV.A


SCHEMATIC SYMBOLS
WIRE NUT
GND SCREW
SERVICE PROVIDED INPUT
LABCONCO INTEGRAL BLOWER
EXT. BLOWER OR CONTACTOR
LINE IN - L2
LINE IN - GND
LINE IN - L1
SERVICE PROVIDED INPUT
FOR LIGHTING CIRCUIT
LINE IN - L2
LINE IN - L1
LINE IN - GND
SERVICE PROVIDED INPUT
OPTIONAL RECEPTACLES
LINE IN - L1
LINE IN - GND
LINE IN - L2
SINGLE POINT JUNCTION BOX
LIGHTS/AIR MONITOR/RECEPTACLES/BLOWER
EXT. BLOWER OR CONTACTOR
WHT
GRN
BLK
3-BLU
4-GRN
3-BLU
4-GRN
BLK
WHT
7B-BLK
8A-WHT
7A-BLK
8A-WHT
BLOWER SWITCH
LIGHT SWITCH
3-GRN
4-BLU
OPTIONAL
AIR MONITOR POWER SUPPLY 230V
MAIN HARNESS P/N 2834500
OPTIONAL AIR MONITOR
LIGHT FIXTURE P/N 2835100
USER SELECTED RECEPTACLE/20A
WARNING
DISCONNECT FROM POWER SOURCE PRIOR TO SERVICING UNIT
LABCONCO
WIRING DIAGRAM
PROTECTOR HOODS
30 SERIES 230V 50/60 HZ.
P/N 2834700 REV.A

APPENDIX D
REFERENCES

Many excellent reference texts and booklets are currently available. The following is a brief listing:

Laboratory Ventilation Standards

Federal Register 29 CFR Part 1910
Non-mandatory recommendations from "Prudent Practices".

- Fume hoods should have a continuous monitoring device
- Face velocities should be between 60-100 linear feet per minute (lfpm)
- Average 2.5 linear feet of hood space per person

Occupational Health and Safety
U.S. Department of Labor
200 Constitution Avenue N.W.
Washington, DC 20210
(202) 523-1452

Industrial Ventilation-ACGIH

- Fume hood face velocities between 60-100 lfpm
- Maximum of 125 lfpm for radioisotope hoods
- Duct velocities of 1000-2000 fpm for vapors, gasses and smoke
- Stack discharge height 1.3-2.0 x building height
- Well designed fume hood containment loss, <0.10 ppm

Industrial Ventilation, A Manual of Recommended Practice.
24th Edition, 2001
American Conference of Governmental Industrial Hygienists
1330 Kemper Meadow drive
Cincinnati, OH 45240-1634
(513) 742-2020

ASHRAE 110-1995 Method of Testing Performance of Fume Hoods
Evaluates fume hood's containment characteristics

- Three part test: Smoke generation, Face velocity profile, Tracer gas release @ 4 liters per minute
- Rated As Manufactured (AM), As Installed (AI) and As Used (AU)

American Society of Heating, Refrigerating, and Air Conditioning Engineers
1791 Tullie Circle N.E.
Atlanta, GA 30329
(404) 636-8400

ANSI Z9.5-1993 Laboratory Standard
Covers entire laboratory ventilation system.

- Vertical stack discharge @ 2000-3000 fpm
- New and remodeled hoods shall have a monitoring device
- Ductless hoods should only be used with non-hazardous materials
- Fume hood face velocities between 80-120 fpm

American Industrial Hygiene Association
2700 Prosperity Avenue, Suite 250
Fairfax, VA 22031
(703) 849-8888

SEFA 1-2002

- Fume hood face velocities based on toxicity levels of chemicals
  Class A – 125 to 150 fpm
  Class B – 80 to100 fpm
  Class C – 75-to 80 fpm
- Test method – face velocity profile and smoke generation

Scientific Equipment & Furniture Association
1028 Duchess Drive
McLean, VA 22102
(703) 538-6007

NFPA 45 – 2002 Fire Protection for Laboratories Using Chemicals

- Laboratory hoods should not be relied on for explosion protection
- Exhaust air from fume hoods should not be recirculated
- Services should be external to the hood
- Canopy hoods only for non-hazardous applications
- Materials of construction should have flame spread of 25 or less
- 80 to 120 fpm to prevent escape

NFPA 30 – 2000 Flammable and Combustible Liquids Code

- Approved cabinets may be metal or wood
- Vent location on cabinets are required
- Venting of cabinets not a requirement

National Fire Protection Association
1 Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9101
(800) 344-3555

General References

American Conference of Governmental Industrial Hygienists. *Industrial Ventilation, A Manual of Recommended Practice,* Cincinnati, OH.

ASHRAE Standard Committee. *ASHRAE Standard* Atlanta: ASHRAE Publications Sales Department, 1995

British Standards Institution, *Laboratory Fume Cupboards*. Parts 1, 2 and 3, London: 1990

Department of Labor, Occupational Safety and Health Administration, *29 CFR Part 1910, Occupational Exposures to Hazardous Chemicals in Laboratories, Final Rule*. Vol. 55, No. 21. Washington D.C.:1990

DiBerardinis. L. et al. *Guides for Laboratory Design, Health and Safety Considerations*. Wiley & Sons, 1987

McDermott, Henry, *Handbook of Ventilation for Contaminant Control*, *2nd Edition*. Butterworth Publishers, 1985.

Miller, Brinton M. et al. *Laboratory Safety: Principles and Practices.* American Society for Microbiology, Washington, D.C.: 1986

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Rayburn, Stephen R. *The Foundation of Laboratory Safety, A Guide for the Biomedical Laboratory*. Springer-Verlag, New York: 1990

Sax, N. Irving and Lewis, JR., Richard J. *Rapid Guide to Hazardous Chemicals in the Workplace*. Van Nostrand Reinhold, 1987.

Schilt, Alfred A. *Perchloric Acid and Perchlorates*. The G. Frederick Smith Chemical Company, Columbus, OH: 1979.

Steere, Norman. *CRC Handbook of Laboratory Safety, 2nd Edition*. CRC Press, 1971.

DECLARATION OF CONFORMITY

Application Council Directive(s): 73/23/EEC, 89/336/EEC

Standard(s) to which conformity is declared: EN61010, EN55022, EN50082-1

Manufacturer's Name:	Labconco Corporation
Manufacturer's Address:	8811 Prospect Avenue Kansas City, MO 64132 USA
Importer's Name:	See Shipping/Customs Documents*
Importer's Address:	See Shipping/Customs Documents for your equipment
Type of Equipment:	Laboratory Equipment- Fume Hoods/Cabinets

Model No: Fiberglass 30 Fume Hood:

3030000 Fiberglass 30 Laboratory Hoods
3030001 Fiberglass 30 Laboratory Hoods
3030002 Fiberglass 30 Laboratory Hoods
3030003 Fiberglass 30 Laboratory Hoods
3030004 Fiberglass 30 Laboratory Hoods
3030005 Fiberglass 30 Laboratory Hoods

Serial No.: Various – See Individual Declaration

Year of Manufacture: 2003 and subsequent

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

See individual Declaration of Conformity which will be signed by the importer for your country.

Place: _____

(Signature)

Date: _____

(Full Name)

_____

(Position)

*An individual version of this declaration is included with your shipping/customs documentation.

Labconco P/N 36960-39 REV. – ECO B699

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